

# Basic Windsor Stool Construction with Jon Welch

A Windsor stool makes an ideal project for both beginner and experienced turners. In comparison to many projects, tool and material requirements are minimal. Design variations are endless, and can often be suited to the available materials or application. The construction process can be completed quickly and doesn't require exacting tolerances for great results.

## Tools

For turning tools, you will need a bowl gouge, a roughing gouge, a spindle gouge, a skew chisel, and a parting tool. At the lathe, you will also need a faceplate or a screw chuck and a set of calipers. Additionally, you will need a drill, various bits, a small handsaw, a block plane, a protractor, a ruler, a compass, and a bevel gauge. While not essential, a bandsaw makes quick work of roughing the seat to size and trimming the leg stock.

## Materials

Windsor stools were traditionally constructed with a softwood seat, a hardwood under-carriage, and a painted finish. However, with common sense, most species and finishes can be used with success. For the seat, almost any piece of 1-1/2 to 2-in. thick wood will do. For the joinery to hold, the legs and stretchers must be made from hardwood.

## Choose a design

There are several factors to consider when choosing a design for a stool:

1. *Finished seat height and width* - for an adult stool, a height of 17-18" and seat width of 12-14" is comfortable
2. *Seat design* - consider the finished thickness (1-1/4 to 1-3/4"), edge profile, and seat relief
3. *Number of legs* - three legs are easier to turn than four, but stools made with three legs have two disadvantages when compared to four-legged stools: they are less stable and can appear somewhat unsymmetrical
4. *Angle of leg splay* - angles between 101°-110° provide ample stability
5. *Leg profile* - choose a design or create your own
6. *Stretcher design* - H stretcher or T stretcher

## Demonstration stool dimensions

- Seat height: 18"
- Seat width: 12-1/4"
- Seat thickness: 1-1/2"
- Seat relief: 1/4"
- Bottom chamfer: 1/2" from edge
- Leg dimensions (*listed as target diameters by distance from the bottom of the leg*): (0": 5/8"), (6": 1-1/4"), (10": 1"), (13": 1-1/8"), (17": 3/4"), (18": 5/8")
- Leg profile: Double-bobbin
- Leg angle: 107°
- Tenon size: 5/8"
- Tenon length: 7/8"
- Distance from edge to center of leg mortise: 1-3/4"

## Additional Resources

- **Stool School – Start easy, work your way up to 4 legs**, by Nick Cook, *American Woodturner*, 2007 (available online at [www.nickcookwoodturner.com/articles-stools.pdf](http://www.nickcookwoodturner.com/articles-stools.pdf))
- **Build a Shop Stool – Put chairmaking techniques to work on a smaller scale**, by Mike Dunbar, *American Woodworker*, February 1999.
- **Building a Basic Stool – Working green wood can be fun as well as simple**, by Harriet Hodges, *Fine Woodworking*, July/August 1997.

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